

PATENT SPECIFICATION

469,230

Application Date : Dec. 23, 1936.

No. 35242/36.

Complete Specification Accepted : July 21, 1937.



COMPLETE SPECIFICATION

Improvements in Shears, primarily intended for Cutting Plaster Bandages

- I, ERNST AXEL JOHAN ERICSSON, of 8, 65
 Andra Långgatan, Göteborg, Sweden, a
 Swedish subject, do hereby declare the
 nature of this invention and in what
 5 manner the same is to be performed, to
 be particularly described and ascertained
 in and by the following statement:—
- This invention relates to plaster-
 bandage shears having two jaws movable
 10 mutually towards and away from each
 other by means of handle arms which
 move in planes that are substantially
 perpendicular to the planes in which the
 handle arms are located.
- 15 The present invention provides plaster-
 bandage shears of the above form which
 are characterised in that the jaw which
 is intended to be located inside the
 plaster-bandage is immovably connected
 20 to parts to which the handle-arms are
 pivoted, whilst the other jaw which
 operates from the outside of the plaster-
 bandage is movable alone by the handle-
 arms for the cutting of the plaster-
 bandage.
- Since by this arrangement the movable
 jaw will not come in contact with the
 patient, when used for cutting bandages
 the cutting of the plaster-bandage will
 30 involve a minimum of pain for the patient
 when the fractured spot is passed by the
 shears. Hitherto in shears for cutting
 plaster-bandages the movable jaw
 partakes in the cutting movement which
 35 operates inside the bandage, whereby it
 has been hardly possible to avoid the
 exerting of a pressure by the inner jaw
 upon the part of the body on which the
 plaster-bandage is applied.
- 40 An embodiment of the invention is
 illustrated in the accompanying drawing
 in which Figure 1 is a plan view of the
 shears, Figure 2 is a side elevation thereof
 with the jaws in the closed position,
 45 Figure 3 is a side elevation of the foremost
 parts of the shears with the jaws in the
 open position, Figure 4 is a section on the
 line IV—IV of Figure 2, Figure 5 is a
 section on the line V—V of Figure 1 and
 50 Figure 6 is a section on the line VI—VI
 of Figure 2. Figures 4 to 6 are drawn
 on a larger scale than Figures 1 to 3.
- One jaw, which in the cutting of the
 plaster-bandage is designed to be placed
 55 inside the bandage, is, in its entirety,
 denoted by A, and the other jaw, which
 operates from the outside of the bandage,
 is, in its entirety, denoted by B. By
 means of a curved piece 1 the jaw A is
 60 rigidly connected with a plate 2. One
 side of the jaw A is formed by a surface 3
 which is curved in cross-section and may
 come in contact with the patient in the
 cutting of the bandage. From said
 65 surface 3 a plate 4 projects, said plate
 having a decreasing height towards the
 extreme end of the jaw. The plate 4 on
 the side opposite to the surface 3 forms
 two edges 5 with which sharp edges 6 of
 70 the other jaw B co-operate in the cutting
 of the plaster-bandage. The jaw B has
 substantially the shape of a guard, the
 shanks of which embrace the plate 4, and
 the foremost end 23 of which is closed.
 Said shanks 8 are substantially wedge-
 75 shaped in cross-section as shown by
 Figures 5 and 6, so that each shank of
 the guard at one side forms the edge 11
 which extends along the plate 4. From
 the side, the shanks of the guard are
 80 angular, each shank being formed by the
 portion 8 extending along the plate 4
 and carrying the edge 6, as well as by an
 arm or extension 9 forming an obtuse
 angle to the portion 8. Where the
 85 portions 8 and 9 merge into each other,
 the two shanks of the guard are connected
 with each other by means of a pin 10
 extending through an oblong hole 11 in
 the piece 1. The guard-shaped jaw B by
 90 means of a pin 12 extending through the
 extreme ends of the arms 9 is connected
 with one end of one link, or, as shown
 in the drawing, two links 13, the other
 ends of which by means of a pin 14 are
 95 connected with the piece 1. The two
 links 13 are provided on each side of the
 piece 1 and extend into the intermediate
 space between the arms 9. One end of a
 bar 16 is connected with the pin 12, said
 100 bar along a portion of its length being
 provided with a series of teeth on two
 opposite sides (Figure 4) engaging with
 a toothed wheel or a segment of such
 wheel 18 upon one end of an arm 20 with
 105 handle 19. Said wheels are pivotable

each about a pin 21 which also hold the plate 2 in a determined distance from a second plate 22. Between these plates the toothed segments 18 and the toothed bar 16 are provided.

The pivot pins 21 of the toothed segments 18 or the arms 20 respectively are positioned in planes which are substantially parallel to the planes in which the mutual movement of the jaws A, B takes place, that is to say, the last-mentioned planes form substantially right angle to the planes in which the arms 20 are swung. The cutting of the plaster-bandage in most cases takes place in vertical cutting planes. Thus, the handle arms will be swung in substantially horizontal planes which facilitates the work.

In the opening of the jaws, the handle arms 20 are swung so that the toothed bar 16 is pulled backwards towards the handles 20, whereby the jaw B by the guiding of the pin 10 in the oblong hole 11 will be pulled away from the jaw A at the same time pivoting about the pin 10 so that the foremost end 23 of the jaw B will be swung out from the jaw A as shown in Figure 3. The cutting proper is effected when the toothed bar 16 is pushed out from the plates 2, 22 (the arms are swung towards each other), whereby the jaw B will effect the same movement as above mentioned though in opposite direction, so that the sharp edges 6 cut off the material in co-action with the edges 5 of the plate 4.

As is evident by the above description the jaw A operating inside the plaster-bandage will not effect any cutting movements which are effected exclusively by the jaw B operating from the outside of the bandage.

The invention is not restricted to the embodiment above described and shown in the drawing. For instance, it is not necessary to connect the movable jaw B with the handle arms by means of a toothed bar and toothed segments. A ball-connection (or a ball-joint) may be used for the same purpose. It is also not necessary to connect the rigid or immov-

able jaw and the movable jaw by means of links 13. Such links may also be absent though the toothed bar 16 or corresponding means in such a case will be exposed to greater strains in the operation of the shears.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Plaster-bandage shears having two jaws movable mutually towards and away from each other by means of handle arms which moves in planes that are substantially perpendicular to the planes in which the handle arms are located, characterised in that the jaw which is intended to be located inside the plaster-bandage is immovably connected to parts to which the handle-arms are pivoted, whilst the other jaw which operates from the outside of the plaster-bandage is movable alone by the handle-arms for the cutting of the plaster-bandage.

2. Plaster-bandage shears as claimed in Claim 1, wherein the movable jaw is connected by means of one or more links with the immovable jaw and with the handle-arms by means of a device for transmitting motion from said arms to the movable jaw.

3. Plaster-bandage shears as claimed in Claim 2, wherein the device for the transmission of motion from the handle-arms to the movable jaw comprises toothed wheels or segments connected to the handle-arms and each engaging with a toothed bar which is connected with the movable jaw.

4. Cutting shears constructed substantially as herein described with reference to the accompanying drawing.

Dated this 23rd day of December, 1936.
KINGS PATENT AGENCY LIMITED,

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Registered Patent Agent,
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Agents for the Applicant.

[This Drawing is a reproduction of the Original on a reduced scale.]

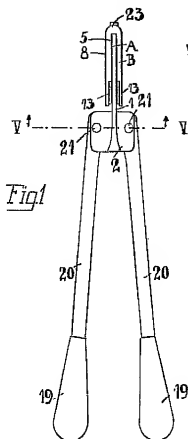


Fig. 1

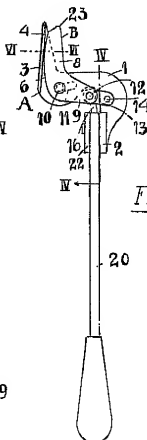


Fig. 2

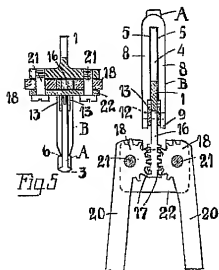


Fig. 3

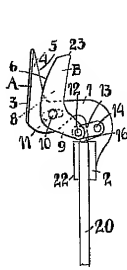


Fig. 4

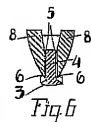


Fig. 5

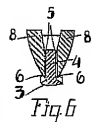


Fig. 6